```
                   -113   -108        -99
    la 5'------TTTGGGCG (T) GCCCCCGCAAGAC-----------3 (SEQ. ID. NO. 34)
                           X←        1BR       5'
                                                      3'(SEQ. ID. NO. 35)
    lb 5'------TTTGGGCG (T) GCCCCCGCGAGAC---------3 '(SEQ. ID. NO. 35)
              XXXCCCGC (G) CGGGGGCGC←      1BR     5' (SEQ. ID. NO. 36)


    la 3'------AAACCCGC (A) CGGGGGCGTTCTG----------5 '(SEQ. ID. NO. 37)
                                                      (SEQ. ID. NO. 38)
        5'    1AB    CG (C) GCCCCCGCXX
    lb 3'------AAACCCGC (A) CGGGGGCGCTCTG---------5 '(SEQ. ID. NO. 39)
        5'    1AB    CG (C) GCCCCCGCGX X         (SEQ. ID. NO. 40)


                   -113   -108          -99
       la 5'-----TTTGGGCG (T) GCCCCCGC (A) AGAC--------- -3 (SEQ. ID. NO. 41)
               AAACCCGC (G) CGGGGGCG (C) ←    1BR     5'(SEQ. ID. NO. 42)
```

FIG. 1

```
              -157         -145      -144
      1a  5'---AGGACCGGGTCCTTTC (. .)  TTGG------------3'  (SEQ. ID. NO. 43)
I-1                          X        ←      6AR-1      5'    C, G
I-2                          X        ←      6AR-1      5'    G, T
      6a  5'---AGGACCGGGTCCTTTC (C A)  TTGG-----------3'  (SEQ. ID. NO. 44)
I-3                          X        ←      6AR-1      5'    C, G
I-4                     XXG  G T      ←      6AR-1      5'    G, T

      6a  5'---AGGACCGGGTCCTTTC (C A)  TTGG----------3'  (SEQ. ID. NO. 45)
II-1             XGGCCCAGGAAAG  G      ←      6AR-2      5'    A, C, G(SEQ. ID. NO. 46)
II-2                    XXG  G         ←      6AR-2      5'    G
      1a  5'---AGGACCGGGTCCTTTC (. .)  TTGG----------3'  (SEQ. ID. NO. 47)
II-3                         X         ↔      6AR-2      5'    A, C, G
II-4                         X         ↔      6AR-2      5'    G
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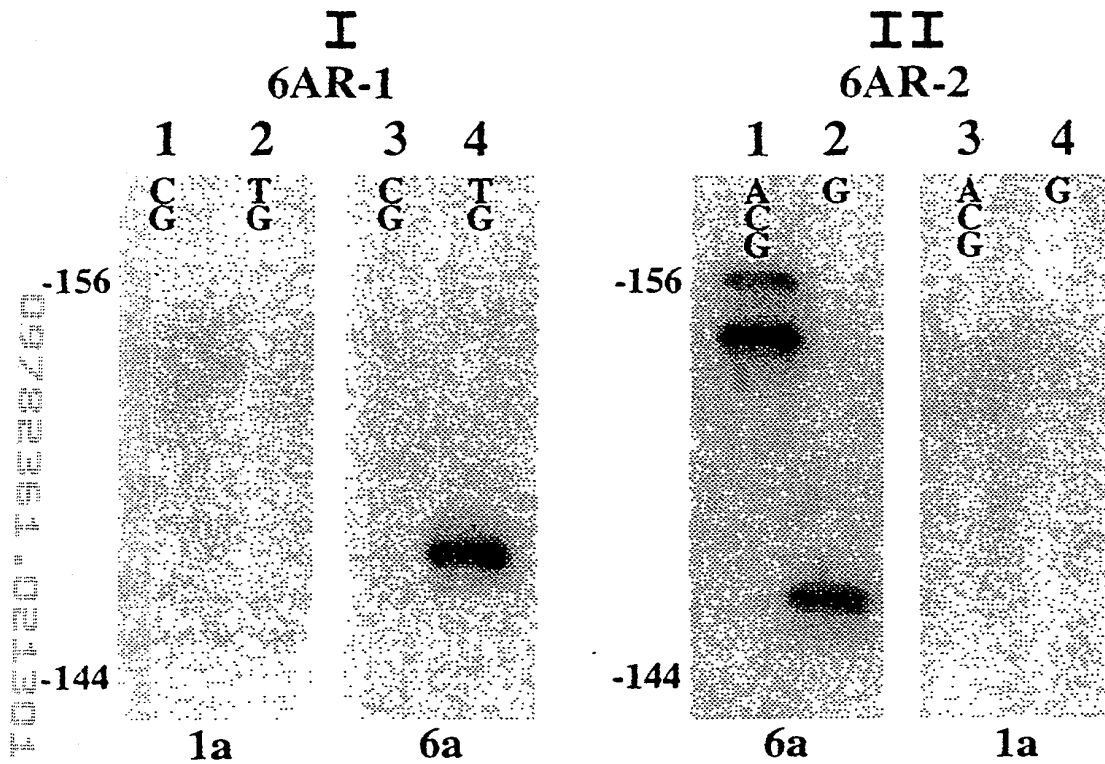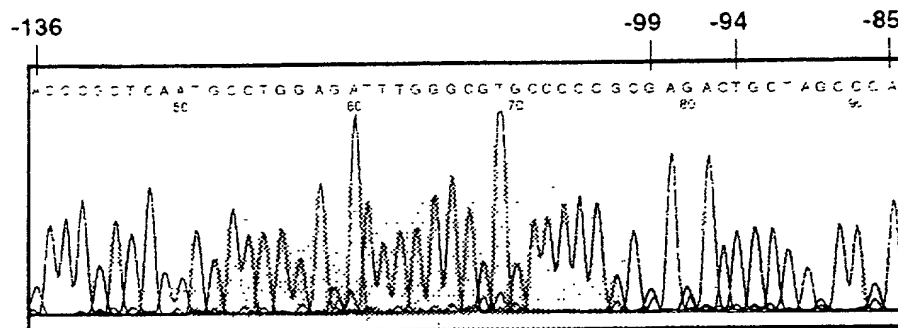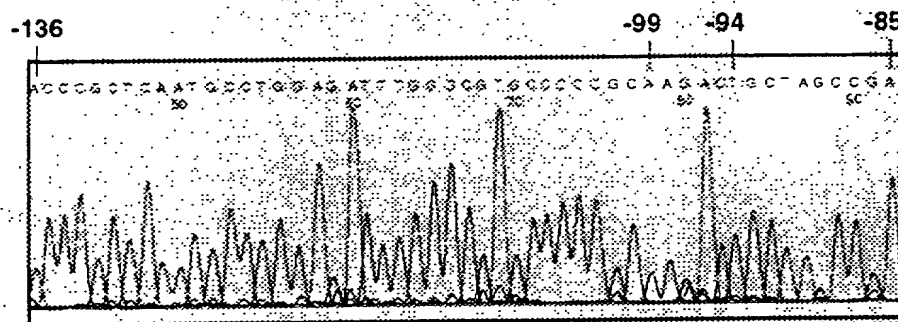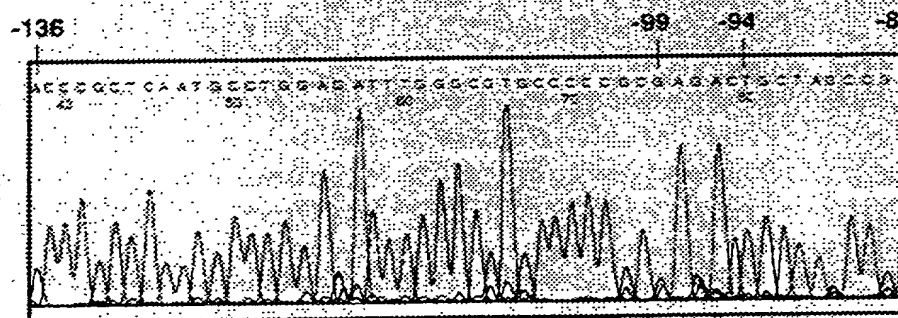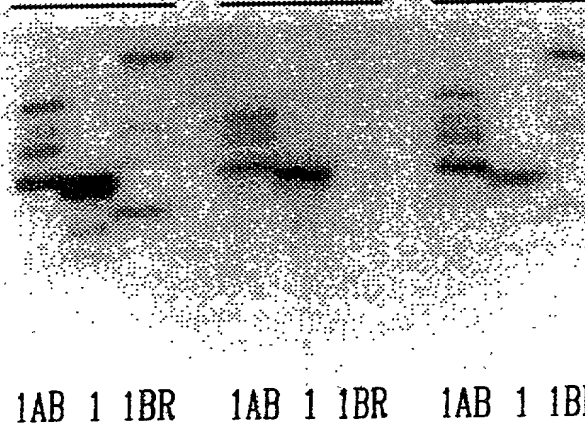
FIG._2

A
           B

						genotype	1a	2b	N
I	II	III	IV	V	VI	primer	1 1AB	2B	6AR
1b 2a	1b 2a	1b 2a	1b 2a	1b 2a	1b 2a				

A'

```
                    G(2a)
                    T(1b)
100%   2a   TGGCCGGGCATAGAGTGGGTTTATCCAAGAAAGGACCCAGTCTTCCTG (SEQ. ID. NO. 48)
       1b   TCTCCAGGCATTGAGCGGGTTGATCCAAGAAAGGACCCGGTCGTCCTG (SEQ. ID. NO. 49)
50%    2a   -NG---N-------A----T-----------------N----T----C-
25%    2a   -CT---A-------A----N-----------------G----T----N-
12.5%  2a   -GN---A-------T----C-----------------G----T----N-
6.25%  2a   -NT---A-------T----C-----------------G----T----N-
3.25%  2a   -CT---A-------T----C-----------------G----T----T-
```

G(2a) G(2a)   A(2a) T(2a)   T(1b+2a)   A(2a) T(2a) C(2a)
C(1b) A(1b)   T(1b) C(1b)   G(1b)   G(1b) G(1b) T(1b)

FIG. 3

I J
(1b)

H
(1a)

I
(1b)

II

J   H   I
(1b)   (1a)   (1b)

1AB 1 1BR   1AB 1 1BR   1AB 1 1BR

FIG_4

FIG. 5A

Expected base extension

dNTPs

ATC	Primer →T CAXX	3
ATG	Primer →T X-XX	1
ACG	Primer →X-X	0
TCG	Primer →T CX--X	2
WT ------A	GTCCACATCCT----(SEQ ID NO:16)	
ATC	Primer →X	0
ATG	Primer →G XX	1
ACG	Primer →G CAGGX-X	5
TCG	Primer →G CX--X	2
MU ------C	GTCCACATCCT----(SEQ ID NO:17)	

FIG. 5B
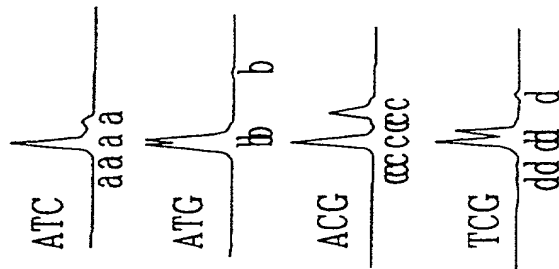
3' **XTCATACTAXTCCAT**GAGTATCTTTAGACACCTGTATTTCG 5'   L63 + PRIMER   (**1**)   (SEQ ID NO:18)
5' AGACAGTATGATCAGTACTCCATAGAAATCTGTGGACATAAAGC 3'   PRO63L(G)-R   (SEQ ID NO:19)

X

3'   GAGTATCTTTAGACACCTGTATTTCG 5'   L63P + PRIMER   (**2**)   (SEQ ID NO:20)
5' AGACAGTATGATCAGGTACCCATAGAAATCTGTGGACATAAAGC 3'   PRO63L(G)-R   (SEQ ID NO:21)

3' **XTCATACTAXTCCAT**GGGTATCTTTAGACACCTGTATTTCG 5'   L63P + PRIMER   (**3**)   (SEQ ID NO:22)
5' AGACAGTATGATCAGGTACCCATAGAAATCTGTGGACATAAAGC 3'   PRO63P(G)-R   (SEQ ID NO:21)

X

3'   GGGTATCTTTAGACACCTGTATTTCG 5'   L63 + PRIMER   (**4**)   (SEQ ID NO:23)
5' AGACAGTATGATCAGGTACTCCATAGAAATCTGTGGACATAAAGC 3'   PRO63P(G)-R   (SEQ ID NO:19)

FIG. 6A

(1) (3)

a   a   a

(2) (4)

d d
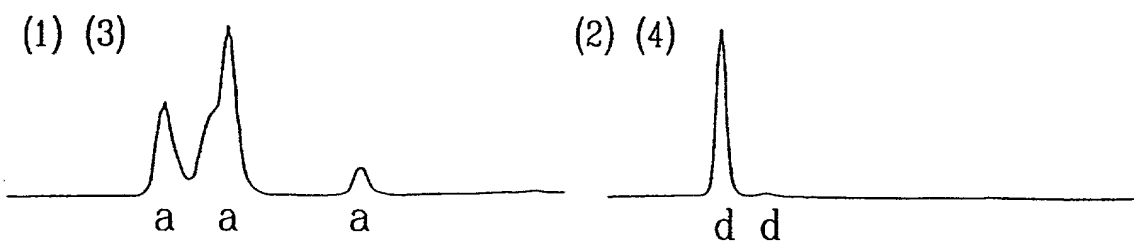
FIG. 6B

```
3'    XXAGACTTCTGAGTCTAACCAACGTGAAATTTA  5' PRO90L-R    (1)  (SEQ ID NO:24)
5' --AATCTGAAGACTCAGATTGGTTGCACTTTAAAT---3'   L90  (SEQ ID NO:25)

              X

3'    TTCTGAGTCTAACCAACGTGAAATTTA  5' PRO90L-R    (2)  (SEQ ID NO:26)
5' --AATCTGATGACTCAGATTGGTTGCACTTTAAAT---3'  L90M (SEQ ID NO:27)

5' CTGTCAACATAATTGGAAGAAATCTGATGACGCAGAXX 3' PRO90M-F (3) (SEQ ID NO:28)
3' --GACAGTTGTATTAACCTTCTTTAGACTACTGCGTCTAA---5'L90M   (SEQ ID NO:29)

              X

5' CTGTCAACATAATTGGAAGAAATCTGAT 3'    PRO90M-F   (4)  (SEQ ID NO:30)
3' --GACAGTTGTATTAACCTTCTTTAGACAACTGAGTCTAA---5'L90 (SEQ ID NO:31)
```
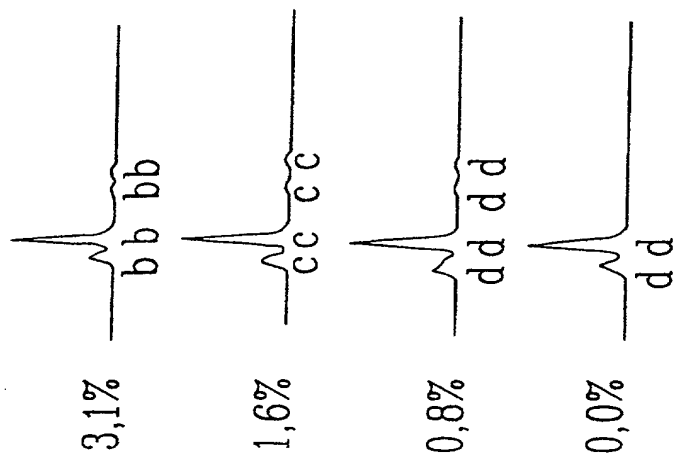
FIG. 7A

(1)

b b

(3)

b b

FIG. 7B

3,1%

1,6%

0,8%

0,0%
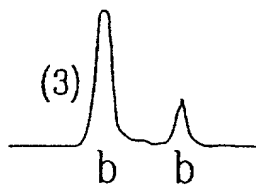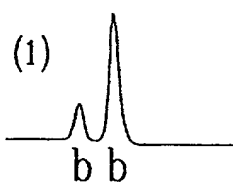
→ T AGTTGTATTAAXX (SEQ ID NO:32)

A TCAACATAATTGGAAAGA (SEQ ID NO:33)

→ X

G

MU

WT

FIG. 8

UNITED STATES PATENT AND TRADEMARK OFFICE
DOCUMENT CLASSIFICATION BARCODE SHEET

Sequence Listing

9

Level - 2
Version 1.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Yu-Wen Hu

Serial No.: To be assigned

Filed: February 13, 2001

For: PRIMER-SPECIFIC AND MISPAIR EXTENSION ASSAY FOR IDENTIFYING GENE VARIATION

Examiner: To be assigned

Group Art Unit: To be assigned

Attorney Docket No.: 4757US

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Number: EL740532602US

Date of Deposit with USPS: February 13, 2001

Person making Deposit: Daniel Thatcher

Statement under 37 C.F.R. §§ 1.821(f)

Commissioner for Patents
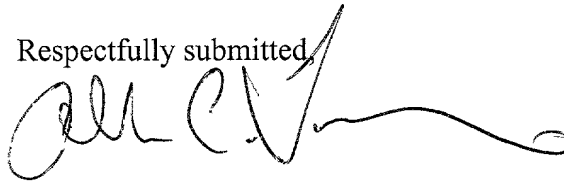Washington, D.C. 20231

Sir:

I, Allen C. Turner, an attorney registered to practice before the United States Patent & Trademark Office and attorney of record for this application, state that:

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2. The enclosed copy of the SEQUENCE LISTING in computer readable form (CRF) is believed to be identical to the paper copy of the SEQUENCE LISTING.

Respectfully submitted,

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TRASK BRITT, PC
P. O. Box 2550
Salt Lake City, Utah 84110
Telephone: (801) 532-1922

Date: February 13, 2001

N:\2883\4757\Sequence listing statement.txt

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          15


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```
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